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THE RELIABILITY OF WRITTEN REPORTS AND VERBAL INQUIRY IN ASSESS--ETC(U)

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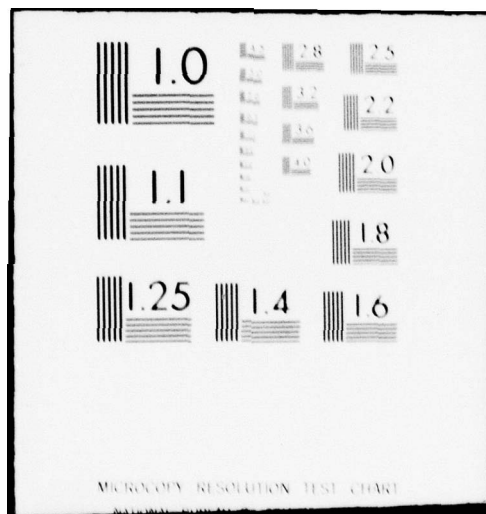
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THE RELIABILITY OF WRITTEN REPORTS AND VERBAL
INQUIRY IN ASSESSING MARITAL INTERACTIONS.

10 By DELANYARD LAFETTE/ROBINSON

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and approved by

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Donald R. Peterson
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ABSTRACT OF THE THESIS

The Reliability of Written Reports and Verbal
Inquiry in Assessing Marital Interactions

by DELANYARD LAFETTE ROBINSON

Thesis Director: Professor Donald R. Peterson

Previous research has shown that affects, construals and response expectancies in the interactions of married couples can be reliably inferred from written interaction records (Peterson, 1978). This study was conducted to determine whether reliabilities could be improved by interviewing participants about their interactions after written records of the interactions have been completed. Four raters were exposed to two sources of information concerning the interpersonal interactions of six married couples: 1. each spouse's written account of the interactions; and 2. audio-recorded inquiry of spouses designed to enrich and clarify their accounts of the interactions. Each rater's interpretations involved the selection of specific interaction codes to describe different kinds of affect, construals and expectations associated with major acts in each marital interaction, and summary characterizations concerning the degree of intimacy, effectiveness of communication, self-regard, regard for spouse, control, assertiveness and aggression that existed in each marital relationship. Orders of presentation were counterbalanced, and judgments were made following presentation of each kind

of information. After the individual interpretations were complete, all four raters met and reached consensus interpretations involving interaction codes and summary characterizations for each married couple. Levels of agreement between individual and consensus interpretations were computed (using kappa statistics to correct for chance agreement) and compared. The following findings emerged:

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INTRODUCTION

Although researchers and therapists, who are interested in the study and treatment of interpersonal relationships, share a need for valid, reliable and problem-related information concerning the interpersonal interactions involved in such relationships, issues regarding adequate methods by which such information can be obtained are rarely addressed. Most literature on interpersonal behavior concerns the many divergent theoretical views of interpersonal relations (e.g., Swensen, 1976) or the treatment of interpersonal problems (e.g., Olson, 1976). Some attention has been given to issues of assessment by such investigators as Bales (1951), Leary (1957), Weiss, Hops and Patterson (1973) and Stuart (1969). Previous efforts to assess interpersonal relationships, however, have either failed to study the process of interaction over time or to examine the interplay of covert affective and cognitive behavior with the overt behaviors of people in their relationships. The work of Peterson (1977; 1978), which focuses on recurrent interaction sequences between people, is expressly devoted to the development of better methods for studying interpersonal behavior, and examines both covert and overt aspects of interpersonal process, offers some promise in this regard. One of the methods Peterson used in his studies of marital interactions, i.e., written interaction records, is of particular interest in the present study. This method required married couples to record

any particularly troublesome exchanges or enjoyable ones which went on between them during a given week. Interaction record forms were provided for each spouse to describe where and when the interaction took place, the course of the interaction (who did and said what to whom, how they felt and what they thought during the exchange) and how it came out. Peterson found interrater agreement values (which were corrected for chance agreement through the use of the kappa statistic) of .65 for specific codes and .77 for general codes when raters used these interaction records to specify the kind of affect, construals and expectations associated with the interpersonal messages of each spouse indicated in these records (1978). Peterson, upon observing that efforts to increase interrater agreement by providing training for raters yielded almost the same agreements that were obtained without training, concluded that:

1. written interaction records are not sufficiently detailed to elicit high interrater agreement; and 2. it is likely that improvements in interrater agreement might be obtained more by refining basic data (e.g., by detailed inquiry of the participants after the records have been examined) than by further efforts to train raters in the coding procedures.

In consideration of the above issues, the following questions were chosen for investigation:

1. Can the rather surprisingly high interrater agreement values reported in Peterson's earlier research be

duplicated in another investigation?

2. Can interrater agreement values which are originally obtained via examination of written interaction records be improved by detailed inquiry of participants who completed such records?

METHOD

Selection of Married Couples and Raters

Ten married couples were recruited by announcements on bulletin boards at Rutgers University which offered twenty dollars to married couples who had not and were not receiving professional help for marital problems. They were told that the project involved the assessment of marital communication and required no more than 1½ hours of their time. Data from six of these couples were selected for this study on the basis of the comprehensiveness of the interaction records they completed, broadness of the range of affect presented by this combination of couples, and apparent authenticity of the interactions they reported.

The four raters who participated in this study were males. Their background represented different kinds of academic and clinical interests:

Rater A is the Dean of the Graduate School of Applied and Professional Psychology at Rutgers University, possesses a Ph.D. in Clinical Psychology, and has worked as a clinician and as a researcher for over 25 years.

Rater B is a practicing therapist at a clinic for adolescent outpatients. He possesses a Doctor of Psycho-

logy degree in School Psychology. His interests involve the study and treatment of parent-child interactions.

Rater C is an advanced student in the Ph.D. Clinical Psychology Program at Rutgers University and possesses a Ph.D. in Economics. His interests involve the study and treatment of family and small group interactions.

Rater D is a third year student in the Ph.D. Clinical Psychology Program at Rutgers University. His interests involve the behavioral assessment and treatment of addictive behavior.

Acquisition of Marital Interaction Data

Each couple provided written interaction record information and participated in a verbal inquiry with the same interviewer. Each couple was instructed to re-enact either a significantly pleasant or unpleasant interaction that occurred in their marriage, and to conduct such re-enactment for approximately five minutes while it was being audio-recorded. Upon completing the re-enactment, they notified the interviewer so that he could return to the room in which the re-enactment occurred. At this point, the interviewer had no knowledge of the nature nor details of the particular re-enactment that had occurred. The interviewer instructed each spouse to complete an interaction record describing his/her own view of who said what to whom during the re-enactment, what each spouse thought and experienced, and how it turned out. The interaction record form is shown in Table 1. The interviewer

TABLE 1
Interaction Record

Describe this interaction, in your own words, from your viewpoint. Where and when did it happen? _____

How were you feeling as it began? _____

Were there any previous events which influenced what happened between you? _____ What were they? _____

Who made the first move? _____ What did that person do? _____ What happened then?

Describe from start to finish. Who did and said what to whom? What were you thinking and feeling as the interaction went on? What ideas and emotions did your partner seem to have? How did it all come out?

read each spouse's written interaction records and noted ambiguities, gaps, and differences between the written accounts of one spouse versus the other. After carrying out this procedure, he conducted a detailed audio-recorded inquiry of each couple in an effort to reduce ambiguities, fill gaps, and resolve differences in the original written records. The format that he used in his inquiry is shown in Table 2.

Preparation of Marital Interaction Data for Assessment

Each couple's interaction, as indicated by their written interaction records, was broken down into the major moves or acts which made up the interaction sequence. These moves or acts were then recorded in the first column of an interaction summary form shown in Table 3. The instructions that raters used to code interaction summaries while referring to interaction records and while referring to audio-recorded inquiries are shown in Tables G and H of the Appendix. The remaining columns (interpersonal message, affect, construals, and expectations) were left blank so that they could be completed by raters, after they reviewed interaction records and audio-recorded inquiries.

Selection of Measures for Assessment of Marital Interactions

Two sets of measures were used by the raters: 1. Peterson's (1978) Interpersonal Interaction Codes; and 2. Summary Characterizations. The interpersonal interaction

TABLE 2

Format of Verbal Inquiry

"I think I have a general picture of what took place during the interaction, but let's see if we can clarify a few things. Now, I noticed that according to one report the following happened...and according to the other report, something different happened. Could you tell me a little bit about what went on at that point of the interaction? ...I think I have a general idea about this response you wrote, but I wonder if you could tell me a little more about this section of the record..." (as appropriate - "how were you feeling? What were you thinking? What were you expecting him/her to do?") "Now, let's talk for a few minutes about what went on during the interaction. I would like your personal view of what you think was going on. What kind of mood were you in when this interaction started moving?...What were you trying to get each other to do or say?...What specific things did you do to accomplish what you had in mind?... How do you think you sounded to your partner?...How did it all come out?...How do you think this interaction ended?...What would you say your level of satisfaction with the outcome was at the time the interaction ended?"

codes, which were used by raters in this study to complete the remaining columns of the interaction summary, contained a set of measures that included various categories of affect, construals and expectations. The categories for each of these measures, definitions and rules for the use of these categories, are shown in Table 4.

The summary characterization form, which was used by raters to characterize the nature of each couple's marriage, contained measures that included intimacy, effectiveness of communication, self-regard, regard for spouse, control, assertiveness and aggression. Levels for each of these measures, definitions and rules for the use of these forms are shown in Table 5.

Design, Assignment of Raters and Assessments

Two conditions were established under which information was made available to the raters for assessment, and are shown in Table 6. Under the first condition, raters received interaction record information first and then: 1. specified the interpersonal messages that they believed were best attributable to each act shown in the interaction summary form; 2. used the interpersonal interaction codes to code affect, construals and expectations for each act shown in the interaction summary form; and 3. completed the summary characterization form. After completing these tasks, the same raters under the first condition received audio-recorded inquiry information and then completed the same three tasks for a second time. Raters under the

TABLE 4a

Definition and Categories of Affect

AFFECT

The feelings or emotions experienced by a person while emitting each act of interpersonal behavior. The specific terms defining each affective state should be considered inclusively, i.e., if one or more of the specific terms applies, the general category may be used. Thus, Category 1, Active Affection, may be attributed if evidence of affection and/or intimacy and/or love and/or tenderness and/or acceptance appears in the record. Try to limit attributions of affect to one category per act by identifying the dominant feeling which appears and record that. If more than one affect must be registered, code the secondary feelings in parentheses. Thus, if the strongest apparent feelings in a given act are of active affection, but some sexual feelings are also beginning to appear, code the affect 1(4). Register some affect for every act, whether evidence suggesting occurrence of the feeling is clear or not.

Major Groups

- | | |
|---|---|
| <p>A. <u>Affection-Affiliation</u>
Positive feelings for other and for their life together.</p> <ol style="list-style-type: none"> 1. Active affection 2. Received affection 3. Respect 4. Sexual arousal 5. Conciliation 6. Pleasure | <p>C. <u>Aggression-Disapproval</u>
Angry, disapproving, disjunctive feelings toward the other.</p> <ol style="list-style-type: none"> 10. Active aggression 11. Received injury 12. Withdrawal |
| <p>B. <u>Calm-Neutrality</u>
Low arousal, relative freedom from affect.</p> <ol style="list-style-type: none"> 7. Attention 8. Relief 9. Resignation | <p>D. <u>Distress-Dysphoria</u>
Feelings of distress, unpleasant affect.</p> <ol style="list-style-type: none"> 13. Apprehension 14. Depression 15. Guilt 16. Dependence 17. Fatigue 18. Perplexity |

TABLE 4a (Continued)

AffectA. Affection - Affiliation

1. Active affection. Active feelings of affection, desires for intimacy with the other. Feelings of love, tenderness, acceptance. Amiable, cooperative, agreeable feelings toward the other.
2. Received affection. Feelings of being loved, accepted, supported, nourished, appreciated.
3. Respect. High regard for the other. Approval and appreciation of the other's worth.
4. Sexual arousal. Physical-emotional feelings of sexual arousal.
5. Conciliation. Occurs only after previous divisive experience. Wish to make up, reconcile differences or resolve problems.
6. Pleasure. Sense of enjoyment, often arising from sources outside the relationship. Joy, glee, mirth, pleasant anticipation, contentment, satisfaction, quiet fulfillment, positive pleasurable experience.

B. Calm - Neutrality

7. Attention. Task oriented alertness, free of ther affect. Use this category also for affectively neutral actions, i.e., those in which no affect is apparent.
8. Relief. Occurs only following aversive experience. Reduction of negative feelings, freedom from prior distress.
9. Resignation. Occurs only in the face of difficult but apparently inevitable situations. Willingness to endure an aversive but unavoidable condition.

TABLE 4a (Continued)

AffectC. Aggression - Disapproval

10. Active aggression. Active feeling of anger toward the other. Include all degree of anger, from irritation through fury. Vindictive, punitive, vengeful inclinations, critical, disapproving, contemptuous, scornful feelings, as well as feelings of frustration aroused by the inactivity, uncooperativeness, or recalcitrance of the other are included.
11. Received injury. Feeling of being hurt, punished, ill treated, abused, rejected, disapproved by the other.
12. Withdrawal. Wish to isolate oneself from the other, to be left alone or to leave the other.

D. Distress - Dysphoria

13. Apprehension. Anxiety, worry, concern over uncertain, potentially or actually dangerous situations.
14. Depression. Feelings of depression, sadness, dejection, despair.
15. Guilt. Sense of guilt, regret, culpability, contrition or embarrassment over one's own behavior.
16. Dependence. Desire for affection, support, comfort, acceptance, appreciation.
17. Fatigue. Feelings of fatigue, exhaustion, being drained, spent, without reserves of energy.
18. Perplexity. Puzzlement, confusion, uncertainty about what is going on.

TABLE 4b

Definition and Categories of Construal

CONSTRUAL

The beliefs, perceptions, attributions, or constructions imposed by a person upon oneself, the other, or the situation while emitting each act of interpersonal behavior. As with categories of affect, specific terms defining each construction are to be employed inclusively, i.e., if one or more of the specific terms applies, the general category may be used. Thus, Category 1, Approval of Other, may be used if the person appears to regard the other as good and/or competent and/or attractive and/or worthwhile and/or dependable and/or honest and/or responsible and/or truthful. Where possible, limit construals to a single dominant category. Where multiple constructions are apparent, code additional categories in parentheses. Record some construal for every act, whether evidence for the nature of the construal is clear or not.

Major Groups

- | | |
|---|--|
| <p>A. <u>Positive Relationship</u>
Evaluates relationship, situation and/or both participants positively.</p> <ol style="list-style-type: none"> 1. Approval of other 2. Approval of self 3. Received approval 4. Intimacy 5. Empathy 6. Received empathy 7. Trust 8. Enjoyable situation | <p>C. <u>Negative Relationship</u>
Evaluates relationship, situation, and/or both participants negatively.</p> <ol style="list-style-type: none"> 12. Disapproval of other 13. Disapproval of self 14. Received disapproval 15. Distance 16. Uncertainty 17. Received misunderstanding 18. Distrust 19. Unpleasant situation |
| <p>B. <u>Sense of Control</u>
Perceives situation as under control, especially because dominant influence is attributed to self.</p> <ol style="list-style-type: none"> 9. Self responsible 10. Autonomy 11. Manageable situation | <p>D. <u>Loss of Control</u>
Perceives situation as out of control, especially because dominant influence is attributed to other or to external conditions.</p> <ol style="list-style-type: none"> 20. Other responsible 21. Domination 22. Difficult situation |

TABLE 4b (Continued)

Construal

A. Positive Relationship

1. Approval of other. Favorable appraisal of other. Regards other as good, competent, attractive, worthwhile, dependable, honest, responsible, truthful.
2. Approval of self. Favorable appraisal of self. Regards self as good, competent, attractive, worthwhile.
3. Received approval. Believes other approves, appreciates, values one's own qualities or behavior.
4. Intimacy. Sees relationship as affectionate and close. Usually sees other as loving, caring.
5. Empathy. Understands viewpoint, feelings, position, state of the other.
6. Received empathy. Believes own feelings, views, states are understood by the other. Regards treatment by the other as fair, just, legitimate.
7. Trust. Believes other to be dependable, honest, responsible, truthful.
8. Enjoyable situation. Views circumstances as enjoyable, pleasant, often apart from contributions of the other to the situation.

B. Sense of Control

9. Self responsible. Considers self wholly or mainly responsible for state of affairs, willing to cooperate, to blame for misfortune. May specifically deny responsibility or blame of the other.
10. Autonomy. Sense of personal mastery and control over situation. Free of demands from the other.
11. Manageable situation. Sees work to be done, task to be accomplished, matter of fact attitude toward situation. May view situation as unimportant, possibly silly or ludicrous.

Table 4b (Continued)

Construal

C. Negative Relationship

12. Disapproval of other. Unfavorable appraisal of other. Regards other as bad, incompetent, unattractive, unworthy, undependable, dishonest, irresponsible, untruthful.
13. Disapproval of self. Unfavorable appraisal of self. Regards self as bad, incompetent, unattractive, unworthy.
14. Received disapproval. Believes other disapproves, dislikes, devalues one's own qualities or behavior.
15. Distance. Sees relationship as strained, distant. Usually sees other as unloving or unlovable.
16. Uncertainty. Puzzled, unclear, confused, uncertain about viewpoint, feelings, state of other.
17. Received misunderstanding. Believes own feelings, views, states are not understood by the other. Regards treatment by the other as unfair, unjust, illegitimate.
18. Distrust. Believes other to be undependable, dishonest, irresponsible, untruthful.
19. Unpleasant situation. Views situation as unpleasant, distasteful, often apart from contributions of the other to the situation.

D. Loss of Control

20. Other responsible. Considers other wholly or mainly responsible for state of affairs, obliged to act or to cooperate, to blame for misfortune. May specifically deny personal responsibility or blame.
21. Domination. Believes other to be dominating, controlling.
22. Difficult situation. Views situation as demanding serious concern, possibly alarm. Any perception of a serious problem caused by other people beyond the dyad or by external circumstances is involved here.

TABLE 4c

Definition and Categories of Expectation

EXPECTATION

The behavior, construal, or emotion one expects to occur on the part of the other following one's own behavior. Deliberately demanded or elicited responses are included, but so are any other expected reactions on the part of the other participant in the interaction. As with affect and construal categories, specific terms are to be considered inclusively, so that any one, any combination, or all of the descriptions following a response designation will justify use of the broader category. Again, try to limit the inference of an expected response to a single dominant category, but use parentheses to designate secondary expectations as necessary. Register some expected response for every act, whether evidence for the expectancy is clear or not.

Major Groups

A. Compliance

Expects other to comply, concur, or cooperate.

1. Compliance
2. Concurrence
3. Disclosure
4. Acknowledgment of responsibility

B. Positive Affect

Expects other to respond with positive feelings.

5. Active affection
6. Received affection
7. Sexual arousal
8. Conciliation

C. Withdrawal

Expects other to withdraw or reduce involvement in interaction.

9. Withdrawal
10. Relief of demand
11. Reduction of censure
12. Reduced excitement
13. No response

D. Negative Affect

Expects other to respond with negative feelings.

14. Apprehension
15. Received injury
16. Anger
17. Dependence

TABLE 4c (Continued)

ExpectationA. Compliance

1. Compliance. Compliant, cooperative response to request, demand, or invitation. Include expected attention to verbal or other behavior, as in shared conversation, and the expected completion of task-oriented behavior in routine work situations.
2. Concurrence. Agreement with one's own viewpoint; acceptance, comprehension, consensually shared conception or evaluation.
3. Disclosure. Report of affect or construal; disclosure, clarification or explanation of thoughts or feelings.
4. Acknowledgment of responsibility. Acceptance of responsibility for state of affairs. Include acknowledgment of inappropriate behavior, admission of failure or guilt.

B. Positive Affect

5. Active affection. Affectionate, loving, tender, acceptant, approving, appreciative, intimate feelings on the part of the other toward the self.
6. Received affection. Feeling of being loved, accepted, supported, nourished, appreciated.
7. Sexual arousal. Physical-emotional feelings of sexual arousal.
8. Conciliation. Occurs only after previous divisive experience. Wants other to make up, reconcile differences or resolve problems, and ordinarily to feel relieved as a consequence.

TABLE 4c (Continued)

ExpectationC. Withdrawal

9. Withdrawal. To go away, leave one alone, physically leave the situation. Include expected cessation of verbal behavior, e.g., "stop arguing," "be quiet."
10. Relief of demand. Reduction, relief or withdrawal of demand.
11. Reduction of censure. Reduction or withdrawal of blame and disapproval, including forgiveness for past misdeeds and acceptance of apology.
12. Reduced excitement. Reduced arousal, restoration of calm, "calm down."
13. No response. Person goes own way, with no clear response expected from the other. Often occurs at the end of a sequence.

D. Negative Affect

14. Apprehension. Worry, anxiety, or apprehension.
15. Received injury. Hurt feelings, torment, especially feelings of incompetence, ineptitude, unworthiness, low self-esteem, or guilt.
16. Anger. Feelings of anger or irritation, wish to "get the other's goat."
17. Dependence. Yearning for affection, support, comfort, acceptance, appreciation.

TABLE 5

Definitions and Rules for use of Summary

Characterization Categories

After you have coded the messages, affect, construals and expectations for this couple's interaction, complete the following summary characterizations. Be sure to base your ratings on your present impression. Your present impression should be based on the most recent source (either Interaction Record or Verbal Inquiry information) of information you received regarding this couple's interactions.

Intimacy

Is the relationship characterized by warmth, openness, togetherness, or by the opposite?

Intimate

1

2

3

4

Distant

5

Effectiveness of Communication

Do the husband and wife send clear messages and listen attentively, openly and accurately to partner's messages?

Effective
Communication

1

2

3

4

Ineffective
Communication

5

Self-Regard

Does the husband/wife value self positively (self-esteem, self-worth)?

High
Self-Regard

H W

1 1

H W

2 2

H W

3 3

H W

4 4

Low
Self-Regard

H W

5 5

TABLE 5 (Continued)

Regard for Spouse

Does the husband/wife show high consideration (acceptance, admiration, appreciation) for his/her spouse, or practically none at all?

High Regard
for SpouseLow Regard
for Spouse

H W	H W	H W	H W	H W
1 1	2 2	3 3	4 4	5 5

Control

Does the husband/wife attempt to influence his/her spouse by inflicting or threatening to inflict some sort of emotional pain (e.g., rejection, commands, guilt, criticism) or through techniques which do not involve pain (e.g., praise, rational arguments, suggestions, benign humor, compromise)?

Positive ControlAversive Control

H W	H W	H W	H W	H W
1 1	2 2	3 3	4 4	5 5

Assertiveness

Does the husband/wife make his/her desires known to the other in a clear and forceful way, or does he/she not make these known at all and pretend that they do not exist?

AssertiveNon-assertive

H W	H W	H W	H W	H W
1 1	2 2	3 3	4 4	5 5

Aggressiveness

Is the husband/wife behavior designed to inflict injury on the other?

AggressiveNon-aggressive

H W	H W	H W	H W	H W
1 1	2 2	3 3	4 4	5 5

TABLE 6

Conditions under which Different Sources of
Information was made Available for Raters

Condition

#1	Interaction Record Information	Audio-Recorded Inquiry Infor- mation	Consensus Meeting
#2	Audio-Recorded Inquiry Informa- tion	Interaction Record Infor- mation	Consensus Meeting

second condition received audio-recorded inquiry information first, completed the three tasks, received interaction record information second, and completed the three tasks for a second time.

The four raters were systematically assigned to pairs in such a way that each pair completed the required tasks (once) under each condition. Although these raters were assigned to conditions in pairs, they were required to make individual assessments without conversing with each other. Upon completing individual tasks for a given couple under a specified condition, the four raters met and agreed to consensus interaction code selections and summary characterization ratings for the married couple they had rated. This practice of doing individual ratings under the condition specified by the experimenter and then meeting to formulate consensus ratings continued until marital interactions for each married couple had been assessed. The order in which these couples' interactions were assessed is shown in Table 7.

TABLE 7

Order in which Couples' Interactions were
Assessed by Pairs of Raters

<u>Condition</u>	1	2	<u>Couple</u>		5	6
			3	4		
#1	AD	BC	AB	CD	AC	BD
#2	BC	AD	CD	AB	BD	AC

Measurement and Computation of Agreement Levels

The particular way level of agreement between ratings was measured in this study is known as "criterion-referenced" measurement (Livingston, 1975). In Peterson's study (1978) and in the present research, consensus ratings were the criterion against which individual ratings were compared. Level of agreement is gauged by the degree to which the individual scores of raters are in agreement with a particular criterion. This method of measuring agreement allowed simulation of a common practice that already exists in the field; that is, the case conference method where several team diagnosticians, often a psychiatrist, a psychologist and a social worker, each make an individual assessment of a case and then meet in conference to arrive at a group consensus. This kind of situation was approximated by the procedure in this study where independent individual ratings of marital interactions were made first and then followed by consensus ratings. By determining the extent to which an individual assessment is in agreement with consensus assessments derived in a meeting where several individual perspectives are taken into account, inferences about both the relative strength of an individual assessment and the sources of information upon which it was based are allowed.

Levels of agreement between individual ratings and consensus ratings were computed in accordance with the kappa and weighted kappa statistic (Cohen, 1960; 1968)

which corrected for chance agreement. The kappa statistic was used to compute interaction codes because such codes contained nominal-scaled ratings, while the weighted kappa statistic was used for summary characterizations because they contained interval-scaled ratings. One-way analyses of variance were computed for the following comparisons:

1. Percentage of agreement between individual and consensus ratings (concerning specific interaction codes, general interaction codes, and summary characterizations) that was obtained when raters received interaction record information first versus percentage of agreement that was obtained when raters received audio-recorded inquiry information. The purpose of this comparison was to determine whether agreements originally obtained via the use of written interaction records were significantly improved after the same raters were exposed to detailed inquiries of spouses who wrote such records.

2. A comparison identical to the above comparison for the condition under which raters received audio-recorded inquiry information first and written interaction record information second. This set of comparisons allowed an examination of the possibility that change in agreement level was a function of the order in which written interaction record information and audio-recorded inquiry information were made available to raters.

3. Percentage of agreement between individual and consensus ratings (concerning specific interaction codes,

general interaction codes, and summary characterizations) that was obtained after raters under the first condition received audio-recorded information versus percentage of agreement obtained by raters under the second condition after they received written interaction record information. Since this allows a comparison of the final percentage of agreement under each condition, inferences can be made about the relative value of one condition (sequence) versus the other in eliciting high levels of agreement.

RESULTS

Overall Agreement between Individual and Consensus Ratings

Overall kappa levels of agreement between individual and consensus ratings, as yielded by each source and order of information, are shown in Table 8. In each instance, except for specific categories under Condition 2, overall agreement levels that were obtained after raters received a second source of information, were higher than those obtained after raters received only their first source of information. Levels of agreement were higher for Condition 1 (where interaction record information was received first and detailed inquiry information was received second) than those under Condition 2. Also, the degree to which agreement improved, after a second source was made available, was higher for Condition 1 than Condition 2. Percentages of agreement, kappa values, specific breakdowns of these indices of agreement into general interaction code categories, specific interaction code categories

TABLE 8
Kappa Values for Different Sources
and Orders of Information

<u>Condition 1</u>	Interaction Codes		Summary Characteri- zations
	Specific Categories	General Categories	
Written Record only	50	71	71
Record plus Inquiry	61	75	78
<u>Condition 2</u>			
Verbal Inquiry only	43	58	62
Inquiry plus Record	43	59	68

and summary characterization categories are available in Tables A, B, and C of the Appendix.

This study was designed primarily to determine whether agreement values that were obtained via written interaction records could be improved by detailed inquiry of the participants who completed the records. Apparently, some improvement occurred. Whether the degree of improvement is large enough to be statistically reliable, however, must be determined by additional tests. One-way Analyses of Variance were therefore conducted to determine whether agreement levels that were obtained via interaction records versus those complemented by detailed inquiries were the same or different. None of the tests yielded a significant F ratio. The null hypothesis that interaction records and detailed inquiries yield the same level of agreement therefore cannot be rejected. Although the addition of detailed inquiry information to interaction record information resulted in a slight apparent increase of agreement level, the increase was not statistically significant. Further analyses of variance to test order effects for the two sources of information also yielded non-significant results. The variance tables are available as Tables D, E, and F of the Appendix.

In summary, the levels of agreement that were obtained from written interaction records reached approximately the same values reported previously by Peterson (1978). Agreement levels following a detailed verbal inquiry about

the interactions and written records of them were slightly higher, but neither the increase in reliability nor any order effects for the two sources of information was statistically reliable.

REFERENCES

- Bales, R. F. Interaction process analysis. Reading, Mass.: Addison-Wesley, 1951.
- Cohen, J. A coefficient of agreement for nominal scales. Educational and Psychological Measurement, 1960, 20, 37-46.
- Cohen, J. A weighted kappa: Nominal scale agreement with provision for scaled disagreement or partial credit. Psychological Bulletin, 1970, 4, 213-220.
- Leary, T. Interpersonal diagnosis of personality. New York: The Ronald Press, 1957.
- Olson, D. H. L. Treating relationships. Lake Mills, Iowa: Graphic Publishing Company, 1976.
- Peterson, D. R. A plan for studying interpersonal behavior. In N. S. Endler and D. Magnusson (Eds.), Personality at the Crossroads: Current Issues in Interactional Psychology. Hillsdale, New Jersey: Erlbaum Assoc., Inc., 1977.
- Peterson, D. R. Assessing interpersonal relationships by means of interaction records. Manuscript submitted for publication, 1978.
- Stuart, R. B. Operant interpersonal treatment for marital discord. Journal of Consulting and Clinical Psychology, 1969, 33, 675-682.
- Swensen, C. H., Jr. Introduction to interpersonal relations. Illinois: Scott, Foresman and Company, 1973.
- Weiss, R. L., Hops, H. and Patterson, G. R. A framework for conceptualizing marital conflict, a technology for altering it, some data for evaluating it. In L. A. Hamerlynck, L. C. Handy and E. J. Mash (Eds.), Behavior Change: Methodology Concepts and Practice. Champaign, Illinois: Research Press, 1973.

APPENDIX
SUPPLEMENTAL TABLES

TABLE A

Percentage of Agreement Between Individual and Consensus Ratings
for General Categories of Interaction Codes

	<u>Condition #1</u>					
	<u>Order and Source of Information</u>			<u>Second Ratings Based on</u>		
	<u>First Ratings Based on</u>			<u>Audio-Recorded Inquiry Information</u>		
	<u>Raw %</u>	<u>Chance</u>	<u>Kappa</u>	<u>Raw %</u>	<u>Chance</u>	<u>Kappa</u>
Affect	77	18	72	79	17	75
Construal	75	19	69	75	19	69
Expectation	77	18	72	82	15	79
TOTAL	76	18	71	79	17	75

	<u>Condition #2</u>					
	<u>Order and Source of Information</u>			<u>Second Ratings Based on</u>		
	<u>First Ratings Based on</u>			<u>Interaction Record Information</u>		
	<u>Raw %</u>	<u>Chance</u>	<u>Kappa</u>	<u>Raw %</u>	<u>Chance</u>	<u>Kappa</u>
Affect	80	16	76	79	17	75
Construal	61	24	49	61	24	49
Expectation	61	24	49	64	23	53
TOTAL	67	22	58	68	22	59

TABLE B
Percentage of Agreement Between Individual and Consensus Ratings
for Specific Categories of Interaction Codes

Condition #1						
Order and Source of Information						
	First Ratings Based on Interaction Record Information			Second Ratings Based on Audio-Recorded Inquiry Information		
	Raw %	Chance	Kappa	Raw %	Chance	Kappa
<u>Affect</u>						
Affection-Affiliation	75	1	75	75	.1	75
Calm-Neutrality	58	5	56	63	4	62
Aggression-Disapproval	82	2	82	86	2	86
Distress-Dysphoria	50	.3	50	50	.3	50
TOTAL	68	22	52	71	21	63
<u>Construal</u>						
Positive Relationship	75	.1	75	75	.1	75
Sense of Control	70	5	68	70	5	68
Negative Relationship	58	1	58	75	.8	75
Loss of Control	65	3	64	60	3	59
TOTAL	66	22	50	68	22	52
<u>Expectation</u>						
Compliance	62	9	58	62	9	58
Positive Affect	75	.1	75	100	0	100
Withdrawal	60	1	60	60	.8	60
Negative Affect	75	.4	75	75	.4	75
TOTAL	64	23	47	66	22	50
GRAND TOTAL	66	22	50	69	21	61

TABLE B (Continued)

Condition #2

Order and Source of Information

	<u>First Ratings Based on</u> <u>Audio-Recorded Inquiry Information</u>			<u>Second Ratings Based on</u> <u>Interaction Record Information</u>		
	<u>Raw #</u>	<u>Chance</u>	<u>Kappa</u>	<u>Raw #</u>	<u>Chance</u>	<u>Kappa</u>
<u>Affect</u>						
Affection-Affiliation	50	.2	50	50	.2	50
Calm-Neutrality	67	4	66	63	4	62
Aggression-Disapproval	73	3	72	77	3	76
Distress-Dysphoria	100	0	100	100	0	100
TOTAL	71	21	63	71	21	63
<u>Construal</u>						
Positive Relationship	75	.1	75	75	.1	75
Sense of Control	40	3	38	40	3	38
Negative Relationship	67	1	67	67	1	67
Loss of Control	60	3	58	60	3	58
TOTAL	55	25	40	55	25	40
<u>Expectation</u>						
Compliance	50	9	45	47	9	42
Positive Affect	25	.1	25	25	.1	25
Withdrawal	40	1	39	40	1	39
Negative Affect	38	1	38	50	1	50
TOTAL	45	25	27	45	25	27
GRAND TOTAL	57	25	43	57	25	43

TABLE C
Percentage of Agreement Between Individual and Consensus Ratings
for Summary Characterization Categories

Condition #1

Order and Source of Information

	First Ratings Based on Interaction Record Information			Second Ratings Based on Audio-Recorded Inquiry Information		
	Raw %	Chance	Weighted Kappa	Raw %	Chance	Weighted Kappa
Intimacy	71	21	63	85	23	55
Effectiveness of Communication	80	16	76	89	10	88
Self-Regard	57	25	43	70	21	62
Regard for Spouse	87	11	85	92	7	91
Control	83	14	80	92	7	91
Assertiveness	69	21	61	62	24	50
Aggression	79	17	75	83	14	60
TOTAL	76	18	71	81	15	78

Condition #2

Order and Source of Information

	First Ratings Based on Audio-Recorded Inquiry Information			Second Ratings Based on Interaction Record Information		
	Original %	Chance	Weighted Kappa	Original %	Chance	Weighted Kappa
Intimacy	65	23	55	69	21	61
Effectiveness of Communication	69	21	61	78	17	74
Self-Regard	41	25	21	62	24	50
Regard for Spouse	73	20	66	68	22	59
Control	87	11	85	82	15	79
Assertiveness	59	25	45	77	18	72
Aggression	84	13	82	84	13	82
TOTAL	70	21	62	74	19	68

TABLE D

Analysis of Variance for Specific Interaction Code
 Agreements, General Interaction Code Agreements,
 and Summary Characterization Agreements Yielded
 by Interaction Record Versus Inquiry Information:
Condition #1

Specific Interaction Code Agreements

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Information	92.041	1	92.041	.6337
Within Type	<u>3194.917</u>	<u>22</u>	145.224	
TOTAL	3286.958	23		

General Interaction Code Agreements

Source of Variation	Sum of Squares	df	Mean Squares	F
Type of Information	16.666	1	16.666	1.176
Within Type	<u>56.667</u>	<u>4</u>	14.167	
TOTAL	73.333	5		

Summary Characterization Agreements

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Information	82.57	1	82.57	.3167
Within Type	<u>3128.86</u>	<u>12</u>		
TOTAL	3211.43	13		

TABLE E

Analysis of Variance for Specific Interaction Code
 Agreements, General Interaction Code Agreements,
 and Summary Characterization Agreements Yielded
 by Interaction Record Versus Inquiry Information:
Condition #2

Specific Interaction Code Agreements

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Information	3.373	1	3.373	.008
Within Type	<u>9524.59</u>	<u>22</u>	432.936	
TOTAL	9524.96	23		

General Interaction Code Agreements

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Information	1.5	1	1.5	.007
Within Type	<u>877</u>	<u>4</u>	219.25	
TOTAL	878.5	5		

Summary Characterization Agreements

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Information	274.57	1	274.57	.8818
Within Type	<u>3736.29</u>	<u>12</u>	311.36	
TOTAL	4010.86	13		

TABLE F
Analysis of Variance for Final Agreements Yielded by
Condition #1 Versus Condition #2

Specific Interaction Code Categories

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Condition	1080.041	1	1080.041	3.505
Within Condition	<u>6779.917</u>	<u>22</u>	308.178	
TOTAL	7859.958	23		

General Interaction Code Categories

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Condition	352.666	1	352.666	3.187
Within Condition	<u>442.67</u>	<u>4</u>	110.668	
TOTAL	795.336	5		

Summary Characterization Categories

Source of Variation	Sum of Squares	df	Mean Square	F
Type of Condition	114.286	1	114.286	.505
Within Condition	<u>2713.714</u>	<u>12</u>		
TOTAL	2828	13		

TABLE G

Instructions for Coding Interaction Summaries from
Interaction Records

1. Study the coding instructions and categories of affect, construal, and expectation to gain an understanding of the kinds of inferences you will be making and of the categories to be used in coding interaction sequences.
2. Read the two examples at the end of these instructions, interpreting the interactions as you go, and matching your interpretations with the consensus judgments shown on the interaction summaries for the interactions.
3. Read both accounts of each interaction and form a general idea of what went on
4. Segment the sequence into the major acts or moves that took place over the sequence. Each act conveys an interpersonal message, and either explicitly or implicitly expresses an affect, a construal, and an expectation regarding the subsequent behavior of the other person involved in the exchange. One act is set off from another by a change in one or more of those aspects of interpersonal behavior and usually involves a shift in the entire message the person expresses. Complete the entire column of acts before proceeding further with the interpretation.
5. Infer the interpersonal messages or meanings conveyed by each act. Verbally and nonverbally each person communicates to the other some central message in each act as it is performed. In a brief statement, write down the message each act conveys. Complete the entire column of messages before going further with the interpretation.
6. Code affects in accordance with the directions that appear on the coding sheet for affect. Complete the affect column before interpreting construals.
7. Code construals in accordance with directions that appear on the coding sheet for construal. Complete the construal column before inferring expectations.
8. Code response expectations in accordance with the directions that appear on the coding sheet for expectation.

TABLE H

Instructions for Coding Interaction Summaries from
Audio-Recorded Inquiries

1. Read the interaction summary for this couple. It has been segmented into the major acts or moves that took place during this couple's interaction. Each act conveys an interpersonal message, and either explicitly or implicitly expresses an affect, a construal, and an expectation regarding the subsequent behavior of the other person involved in the exchange. One act is set off from another by a change in one or more of those aspects of interpersonal behavior and usually involves a shift in the entire message the person expresses. Read the entire column of acts before proceeding with the next step.

2. The purpose of this next step is to provide you with additional information about the interaction, upon which the interaction summary is based, so that you can form a general idea about what went on. Listen to the audio-recorded interview with this couple concerning the interaction. Pay particular attention to the couple's account of: who said or did what to whom; what each spouse was thinking and feeling as the interaction went on; and how the interaction ended. Pause for a few seconds after you have heard the recording and reflect on your general idea of what went on.

3. Infer the interpersonal messages or meanings conveyed by each act. Verbally and nonverbally each person communicates to the other some central message in each act as it is performed. In a brief statement, write down the message each act conveys. Complete the entire column of messages before going further with the interpretation.

4. Code affects in accordance with directions that appear on the coding sheet for affect. Complete the affect column before interpreting construals.

5. Code construals in accordance with directions that appear on the coding sheet for construals. Complete the construal column before inferring expectations.

6. Code response expectations in accordance with the directions that appear on the coding sheet for expectation.